Author search
09.30.02

```
=> E KAWAKAMI JUN ICHI/AU 25
E1             3      KAWAKAMI JUJI/AU
E2             1-     KAWAKAMI JUN/AU
E3             6 --> KAWAKAMI JUN ICHI/AU
E4             .      KAWAKAMI JUN YA/AU
E5            33      KAWAKAMI JUNICHI/AU
E6             1      KAWAKAMI JUNICHIRO/AU
E7             3.     KAWAKAMI JUNJI/AU
E8             m      KAWAKAMI JUNJIRO/AU
E9             .      KAWAKAMI JUNKO/AU
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E15           11      KAWAKAMI K/AU
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E20            1      KAWAKAMI KAJUHIRO/AU
E21            1      KAWAKAMI KAKA/AU
E22            1      KAWAKAMI KAKEITSUO/AU
E23            2      KAWAKAMI KAKEYUKI/AU
E24            4      KAWAKAMI KAKU/AU
E25            1      KAWAKAMI KAMEI/AU

=> S (E2 OR E3 OR E5 OR E6) AND (IMIDAZOL?)
             1 "KAWAKAMI JUN"/AU
             6 "KAWAKAMI JUN ICHI"/AU
            33 "KAWAKAMI JUNICHI"/AU
             1 "KAWAKAMI JUNICHIRO"/AU
         74171 IMIDAZOL?
L15          1 ("KAWAKAMI JUN" AU OR "KAWAKAMI JUN ICHI"/AU OR "KAWAKAMI
JUNICHI"/AU OR "KAWAKAMI JUNICHIRO"/AU) AND (IMIDAZOL?)

=> d l15 ibib abs hitstr

L15  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:          2000:[illegible]  CAPLUS
DOCUMENT NUMBER:           134:[illegible]
TITLE:                     Process for the preparation of 4-alkanoylimidazole
                           derivatives and 1-(2-naphthyl)-1-(1H-imidazol
                           -4-yl)alkanol derivatives
INVENTOR(S):               Kawakami, Jun-ichi
PATENT ASSIGNEE(S):        Takeda Chemical Industries, Ltd., Japan
SOURCE:                    PCT Int. Appl., 39 pp.
                           CODEN: PIXXD2
DOCUMENT TYPE:             Patent
LANGUAGE:                  Japanese
FAMILY ACC. NUM. COUNT:    1
PATENT INFORMATION:

      PATENT NO.         KIND  DATE          APPLICATION NO.   DATE
      ---------------    ----  --------      ----------------  --------
      WO 2000078727      A1    20001228      WO 2000-JP4036    20000621
          W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CN, CR, CU,
              CZ, DM, DZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ,
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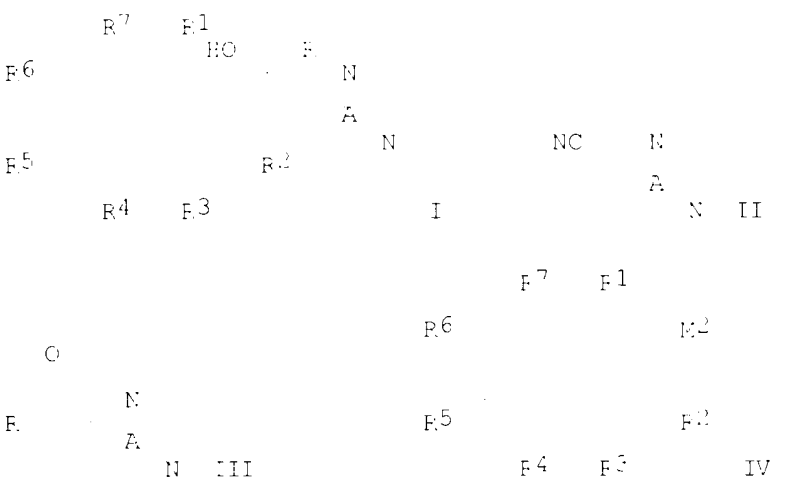
371 of PCT

LC, LK, LR, LT, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ, PL, RO,
RU, SD, SI, SK, TJ, TM, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

JP 2001064264 A2 20010313 JP 1999-191081 19990701
EP 1193258 A1 20020403 EP 1999-940770 19990701
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI, LT, LV, FI, RO
PRIORITY APPLN. INFO.: JP 1998-175071 A 19980622
WO 1999-JP4036 W 19990701
OTHER SOURCE(S): CASREACT 134:56671; MARPAT 134:56671

GI



AB An industrially advantageous process for the prepn. of compds. of general formula (I; wherein the ring A is an optionally substituted **imidazole** ring; R is an optionally substituted hydrocarbon group or a heterocyclic group; and R1, R2, R3, R4, R5, R6, and R7 are each hydrogen, optionally substituted hydrocarbyl, OR, SR, NR2, acyl, halogen, or the like) comprises addn. reaction of 4-cyanoimidazole (II; the ring A is same as above) with R-M1 (R is same as above; M1 = alkali metal, Mg-Y1; Y1 = halo) to give 4-acylimidazole (III; R and ring A are same as above), followed by addn. reaction of III with naphthalene alkali metals (IV; R1 - R7 are = same as above; M2 is alkali metal, Mg-Y2; Y2 is halo). This process is reduced in the no. of steps, attains a high yield, and dispenses with the use of a heavy metal compd. The compds. I exhibit a steroid C17-C20 lyase inhibitory activity (no data). Thus, a soln. of 42.7 g 4-cyanoimidazole in 500 mL THF was added dropwise to a 1.1. M soln. of isopropylmagnesium bromide in THF (2.4 L) over a period of 30 min, stirred at 10-15.degree., treated dropwise with 10% aq. H2SO4, stirred for 30 min, neutralized to pH 8 with 30 aq. NaOH, and extd. with EtOAc (300 L .times. 2) to give 82% 1-(1H-**imidazol**-4-yl)-2-methyl-1-propanone

(V). 2-Bromo-6-methoxynaphthalene (5.15 g) was added dropwise to a mixt. of 0.55 g and 3 mg iodine in THF at 50.degree. and stirred at 15-25.degree. for 1.5 h, followed by adding dropwise a soln. of 1 g V in THF, and the resulting mixt. was stirred at 15-25.degree. for 8 h to give, after workup, 84% 1-(1H-**imidazol**-4-yl)-1-(6-methoxynaphthalen 2-yl)-2-methylpropanol.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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NEWS 9 Jun 03 New e-mail delivery for search results now available
NEWS 10 Jun 10 MEDLINE Reload
NEWS 11 Jun 10 PCTFULL has been reloaded
NEWS 12 Jul 02 PROMT no longer contains STANDARDS file segment
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS 14 Jul 24 Enhanced polymer searching in REGISTRY
NEWS 15 Jul 30 NETFIRST to be removed from STN
NEWS 16 Aug 05 CANCERLIT reload
NEWS 17 Aug 05 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18 Aug 06 NTIS has been reloaded and enhanced
NEWS 19 Aug 13 Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS 20 Aug 19 IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced
NEWS 23 Sep 03 JAPIO has been reloaded and enhanced
NEWS 24 Sep 16 Experimental properties added to the REGISTRY file
NEWS 25 Sep 16 Indexing added to some pre-1967 records in CA/CAPLUS
NEWS 26 Sep 16 CA Section Thesaurus available in CAPLUS and CA
NEWS 27 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985

NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.0a, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
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FILE 'HOME' ENTERED AT 16:13:37 ON 01 OCT 2002

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COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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STRUCTURE FILE UPDATES: 30 SEP 2002 HIGHEST RN 457600-76-9
DICTIONARY FILE UPDATES: 30 SEP 2002 HIGHEST RN 457600-76-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=>
Uploading 10019094 cyano reactant.str

L1 STRUCTURE UPLOADED

=> d
L1 HAS NO ANSWERS
L1 STR

CN

N

N

Structure attributes must be viewed using STN Express query preparation.

=> s l1 ful
FULL SEARCH INITIATED 16:14:34 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 51045 TO ITERATE

100.0% PROCESSED 51045 ITERATIONS 6589 ANSWERS
SEARCH TIME: 00.00.02

L3 6589 SEA SSS FUL L1

=>
Uploading 10019094 elect.str

L4 STRUCTURE UPLOADED

=> d
L3 HAS NO ANSWERS
L4 STR

Cl 3

O

Hy 1

G2 N H

G1 4

Ak 2

N

H

G1 C,H
G2 [@1],[@2],[@3],[@4]

Structure attributes must be viewed using STN Express query preparation.

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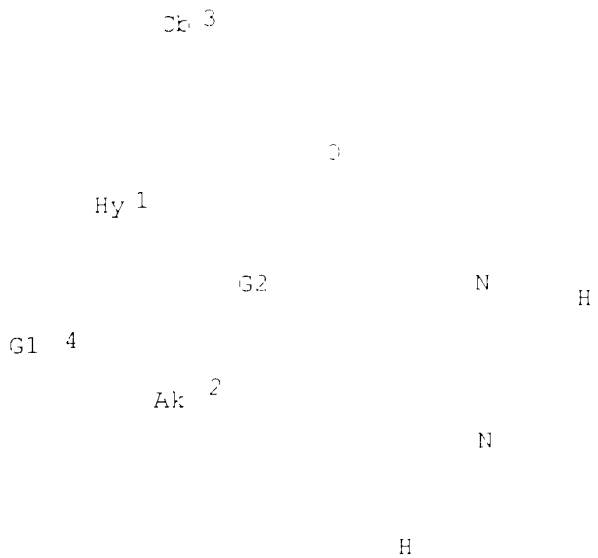
L3 HAS NO ANSWERS
L4 STR



G1 C,H

G2 [@1],[@2],[@3],[@4]

Structure attributes must be viewed using STN Express query preparation.

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FULL SEARCH INITIATED 16:15:34 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 49400 TO ITERATE

100.0% PROCESSED 49400 ITERATIONS 4288 ANSWERS
SEARCH TIME: 00.00.00

L4 4288 SEA SSS FUL L3

=> fil caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION

FULL ESTIMATED COST 280.94 281.15

FILE 'CAPLUS' ENTERED AT 16:15:46 ON 01 OCT 2002
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FILE COVERS 1907 - 1 Oct 2002 VOL 137 ISS 14
FILE LAST UPDATED: 30 Sep 2002 (20020930/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

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=> s l4 and l2 ful
          2134 L4
          1661 L2
L5         142 L4 AND L2

=> s l4/p
L6        1234 L4/P

=> s l6 and l2
          1661 L2
L7         113 L6 AND L2

=> s inhibit?
L8     1514816 INHIBIT?

=> s imidazol?
L9       74190 IMIDAZOL?

=> s l9 and l7
L10         60 L9 AND L7

=> s l10 and lyase?
         13958 LYASE?
L11          1 L10 AND LYASE?

=> s process?
L12    2844603 PROCESS?

=> s l10 and l12 ful
L13          7 L10 AND L12

=> d l13 1-7 ibib abs hitstr
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L13 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:[illegible] CAPLUS
DOCUMENT NUMBER: 133:[illegible]
TITLE: **Process** for the preparation of 4-alkanoylimidazole derivatives and 1-(2-naphthyl)-1-(1H-**imidazol**-4-yl)alkanol derivatives
INVENTOR(S): Kawakami, Yoshimi
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	APPLICATION NO.	DATE
WO 2000079727	A1	20001228	WO 2000-JP4336	20000621

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
JP 2001064264 A2 20010313 JP 2000-175370 A 19990622
EP 1193258 A1 20020403 EP 2000-940770 A 20000621
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
PRIORITY APPLN. INFO.: JP 1999-175370 A 19990622
WO 2000-JP4336 W 20000621
OTHER SOURCE(S): CASREACT 133:[illegible]; MARPAT 133:[illegible]
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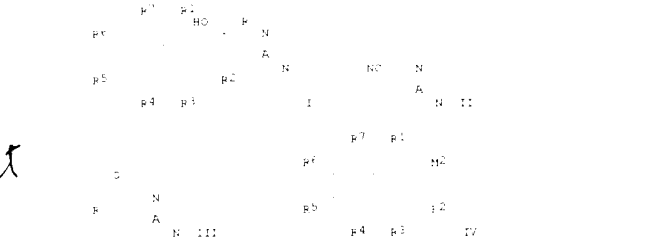
371 of PCT

L13 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)



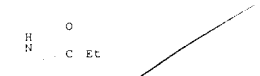
AB An industrially advantageous **process** for the prepn. of compds. of general formula (I, wherein the ring A is an optionally substituted **imidazole** ring; R is an optionally substituted hydrocarbon group or a heterocyclic group; and R1, R2, R3, R4, R5, R6, and R7 are each hydrogen, optionally substituted hydrocarbyl, OH, SH, NH2, acyl, halogeno, or the like) comprises addn. reaction of 4-cyanoimidazole (II; the ring A is same as above) with R-M1 (R is same as above; M1 = alkali metal, Mg-Y1; Y1 = halo) to give 4-acylimidazole (III; R and ring A are same as above) followed by addn. reaction of III with naphthalene alkali metals (IV; R2 - R7 are = same as above; M2 is alkali metal, Mg-Y2; Y2 is halo). The **process** is reduced in the no. of steps, attains a high yield, and dispenses with the use of a heavy metal compd. The compds. I exhibit a steroid C17-C20 lyase inhibitory activity (no data). Thus, a soln. of 42.7 g 4-cyanoimidazole in 500 mL THF was added dropwise to a 1.4 M soln. of isopropylmagnesium bromide in THF (1.4 L) over a period of 30 min, stirred at 15-25.degree., treated dropwise with 10% aq. H_2SO_4, stirred for 30 min, neutralized to pH 9 with 30% aq. NaOH, and extd. with EtOAc (3.00 L, times. 2) to give 82% 1-(1H-**imidazol**-4-yl)-2-methyl-1-propanone (V). 2-Bromo-6-methoxynaphthalene (5.15 g) was added dropwise to a mixt. of 0.55 g and 3 mg iodine in THF at

L13 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)
50.degree. and stirred at 15-25.degree. for 1.5 h, followed by adding dropwise a soln. of 4.9 g V in THF, and the resulting mixt. was stirred at 15-25.degree. for 8 h to give, after workup, 8% 1-(1H-**imidazol**-4-yl)-2-(6-methoxynaphthalen-2-yl)-2-methylpropanol
IT **57090-88-7**, 4-Cyanoimidazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of 4-alkanoylimidazole derivs. and .alpha.-(2-naphthyl)-.alpha.-(1H-**imidazolyl**)alkanol derivs. by addn. reaction of cyanoimidazoles with alkylmagnesium bromides followed by naphthylmagnesium bromide)
RN 57090-88-7 CAPLUS
CN 1H-Imidazole-4-carbonitrile (9CI) (CA INDEX NAME)

IT **247174-71-6P**, 1-(1H-**Imidazol**-4-yl)-2-methyl-1-propanone
304457-79-2P, 1-(1H-**Imidazol**-4-yl)-1-butanone
304457-86-1P, 1-(1H-**Imidazol**-4-yl)-1-propanone
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of 4-alkanoylimidazole derivs. and .alpha.-(2-naphthyl)-.alpha.-(1H-**imidazolyl**)alkanol derivs. by addn. reaction of cyanoimidazoles with alkylmagnesium bromides followed by naphthylmagnesium bromide)
RN 247174-71-6 CAPLUS
CN 1-Propanone, 1-(1H-imidazol-4-yl)-2-methyl- (9CI) (CA INDEX NAME)

RN 304457-79-2 CAPLUS
CN 1-Butanone, 1-(1H-imidazol-4-yl)- (9CI) (CA INDEX NAME)

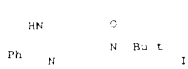
L13 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)
RN 304457-86-1 CAPLUS
CN 1-Propanone, 1-(1H-imidazol-4-yl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:[illegible] CAPLUS
DOCUMENT NUMBER: 136:[illegible]
TITLE: Synthesis, Structure, and Neuroprotective Properties
of
Novel **Imidazolyl** Nitrones
AUTHOR(S): Stolnaja, Alain; Floch, Andre; Raimbaud, Eric;
Lobstein, Brian; Lestage, Pierre; Guilbert,
Bernard
CORPORATE SOURCE: Chemistry Research Division A and Molecular
Modeling
Department, Institut de Recherches Servier,
Suresnes,
[illegible]
SOURCE: Journal of Medicinal Chemistry, [illegible], 4811,
[illegible]
CODEN: JMCMAR; ISSN: [illegible]
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OI

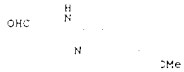
must be earlier than 6.21.99 ∴ No good



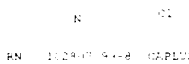
AB A new series of **imidazolyl** nitrones spin traps has been synthesized and evaluated pharmacol. The salient structural feature of these mols. is the presence of an **imidazole** moiety substituted by arom. or heteroarom. rings. This connectivity imparts to the nitrone superior neuroprotective properties in vivo and in parallel reduced side effects and toxicity. Thus, I administered i.p. protects (8 h) mice from lethality induced by an intracerebroventricular administration of tert Bu hydroperoxide (t BHP) an oxidant capable of inducing neurodegenerative **processes**. Administration of the archetypal nitrone phenyl tert-Bu nitrone (PBN) at an equimolar dose also affords some protection (6%) in this test. However, this activity is accompanied by hypothermia, whereas no such effect is apparent for I. Moreover, previously prepd. nonsubstituted or alkyl-substituted **imidazolyl** nitrones were shown to be extremely toxic to rats in contrast to the compds. prepd in this study. The obsd. activities in vivo correlate well with the calcd. partition coeffs. (ClogP) and HOMO energy level.

IT **34626-11-4P 94938-02-0P 94938-03-1P**
97749-71-8P 97749-78-5P 102807-99-8P

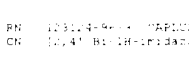
L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)



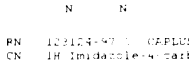
RN 97749-78-5 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(3-chlorophenyl)- (9CI) (CA
INDEX NAME)



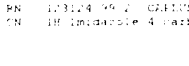
RN [illegible] CAPLUS
CN 1H-Imidazole-4-carbonitrile, 2-(2-furanyl)- (9CI) (CA INDEX NAME)



RN [illegible] CAPLUS
CN [1,4'-Bi-1H-imidazole]-4-carbonitrile (9CI) (CA INDEX NAME)



RN [illegible] CAPLUS
CN 1H-Imidazole-4-carbonitrile, 2-(3-pyridinyl)- (9CI) (CA INDEX
NAME)

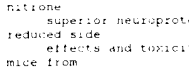


RN [illegible] CAPLUS
CN 1H-Imidazole-4-carbonitrile, 2-(2-thienyl)- (9CI) (CA INDEX NAME)

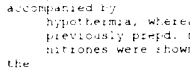
L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)
123124-96-9P, [1,4'-Bi-1H-**imidazole**]-4-carbonitrile
123124-97-0P 123124-99-2P 279250-68-9P
279250-88-3P 279250-89-4P 279250-90-7P
279250-91-8P 279250-92-9P 279250-93-0P
279250-94-1P 279250-95-2P 279250-96-3P
279250-97-4P 279250-98-5P 279251-01-3P
279251-02-4P 279251-03-5P 279251-04-6P
279251-05-7P 279251-06-8P, [1,4'-Bi-1H-**imidazole**]-4-carboxaldehyde **279251-07-9P 279251-08-0P**
279251-09-1P 279251-10-4P 279251-11-5P
279251-12-6P 279251-13-7P 279251-14-8P
279251-15-9P 279251-16-0P 279251-17-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
synthesis and neuroprotective properties of **imidazolyl** nitrones

RN 34626-11-4 CAPLUS
CN 1H-Imidazole-4-carbonitrile, 2-(4-pyridinyl)- (9CI) (CA INDEX
NAME)

RN 94938-02-0 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 1-methyl-2-phenyl- (9CI) (CA INDEX
NAME)



RN 94938-03-1 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 1-methyl-2-phenyl- (9CI) (CA INDEX
NAME)



RN 97749-71-8 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(4-methoxyphenyl)- (9CI) (CA
INDEX NAME)

L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)

RN 279251-68-9 CAPLUS
CN 1H-Imidazole-4-carbonitrile, 2-(1-naphthalenyl)- (9CI) (CA INDEX
NAME)

RN 279251-88-3 CAPLUS
CN 1H-Imidazole-4-carbonitrile, 2-(1-naphthalenyl)- (9CI) (CA INDEX
NAME)

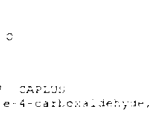
RN 279251-94-4 CAPLUS
CN 1H-Imidazole-4-carbonitrile, 2-(3-furanyl)- (9CI) (CA INDEX NAME)

RN 279251-96-6 CAPLUS
CN 1H-Imidazole-4-carbonitrile, 2-(2-thienyl)- (9CI) (CA INDEX
NAME)

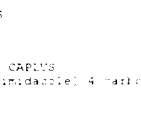
L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2012 ACS (Continued)
RN 279251-02-4 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(1-naphthalenyl)- (9CI) (CA INDEX NAME)

RN 279251-03-5 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(2-furanyl)- (9CI) (CA INDEX NAME)

RN 279251-04-6 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(3-furanyl)- (9CI) (CA INDEX NAME)



RN 279251-05-7 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(2-thienyl)- (9CI) (CA INDEX NAME)



RN 279251-06-8 CAPLUS
CN [2,4'-Bi-1H-imidazole]-4-carboxaldehyde (9CI) (CA INDEX NAME)

L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2012 ACS (Continued)

RN 279251-07-9 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(2-thiazolyl)- (9CI) (CA INDEX NAME)

RN 279251-08-0 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(2-pyridinyl)- (9CI) (CA INDEX NAME)

RN 279251-09-1 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(3-pyridinyl)- (9CI) (CA INDEX NAME)

RN 279251-10-4 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(4-pyridinyl)- (9CI) (CA INDEX NAME)

RN 279251-11-5 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

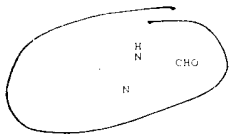
L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2012 ACS (Continued)

RN 279251-12-6 CAPLUS
CN 1H-Imidazole-4-carbonitrile, 2-(4-chlorophenyl)- (9CI) (CA INDEX NAME)

RN 279251-13-7 CAPLUS
CN 1H-Imidazole-4-carbonitrile, 2-(3-chlorophenyl)- (9CI) (CA INDEX NAME)

RN 279251-14-8 CAPLUS
CN 1H-Imidazole-4-carbonitrile, 2-(4-methylphenyl)- (9CI) (CA INDEX NAME)

RN 279251-15-9 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(2-naphthalenyl)- (9CI) (CA INDEX NAME)



103 deviverses of H. vs. CH_3 ... ? (@ carbonyl)

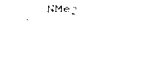
L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2012 ACS (Continued)

RN 279251-16-0 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(4-methylphenyl)- (9CI) (CA INDEX NAME)

RN 279251-17-1 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)

RN [illegible] CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 1-[4-(dimethylamino)phenyl]- (9CI) (CA INDEX NAME)

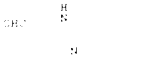


RN 27925-16-8 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 1-[4-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)

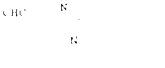
RN 27925-14-6 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 1-(4-fluorophenyl)- (9CI) (CA INDEX NAME)

RN 27925-15-9 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-(4-chlorophenyl)- (9CI) (CA INDEX NAME)

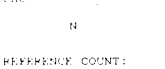
L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)



RN [illegible] CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 1-(4-methylphenyl)- (9CI) (CA INDEX NAME)



RN [illegible] CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 1-(4-fluorophenyl)- (9CI) (CA INDEX NAME)



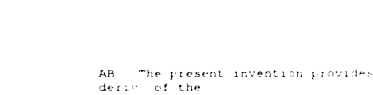
REFERENCE COUNT: [illegible] THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:274646 CAPLUS
DOCUMENT NUMBER: 123:55976
TITLE: Quinoline derivatives, **process** for their preparation, and their therapeutic applications
INVENTOR(S): Diemer, Gerard; Gonvenille, Pascale; Muller, Jean Claude
PATENT ASSIGNEE(S): Synthelabo S. A., Fr.
SOURCE: U.S., 7 pp. Continuation-in-part of U.S. Ser. No. 967,124, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5471277	A	1995[illegible]	US 1993-[illegible]	1993[illegible]
FR 2699536	A1	1994[illegible]	FR 1992-[illegible]	1992[illegible]
FR 2699536	B1	1994[illegible]		
US 5432183	A	1995[illegible]	US 1994-[illegible]	1994[illegible]
PRIORITY APPLN. INFO.:			FR 1992-[illegible]	1992[illegible]
			US 1992-[illegible]	1992[illegible]
			US 1993-[illegible]	1993[illegible]
OTHER SOURCE(S):		MARPAT 123:55976		

12.6.94 = good date

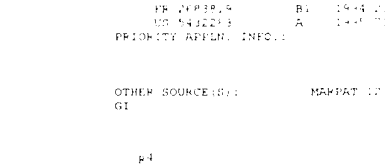
GI



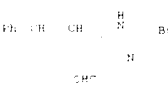
AB The present invention provides a compd. which is a quinoline deriv. of the formula I; R1 represents either 1H-tetrazol-5-yl, or CO2H, R2 represents either (C1-7 alkyl or C2-7 alkenyl), R3 and R4 represent, independently of each other, hydrogen, halogen, cyano group, C1-7 alkyl, C3-7 cycloalkyl, C1-4 alkyl, aryl, aryl-C1-4 alkyl, aryl-C2-4 alkenyl, -NR5R6 in which R5 and R6 represents hydrogen, C1-4 alkyl, C1-4 alkoxy, or NR5R6, R5 and R6 represent, independently of each other, hydrogen, C1-4 alkyl, C3-7 cycloalkyl, C1-4 alkoxy-C1-4 alkyl, aryl-C1-4 alkyl, or NR5R6 in which R5 and R6 represents CH2, (C1-6)alkoxy, (C1-4)alkoxy(C1-4)alkoxy, or (C3-7)cycloalkyl(C1-4)alkoxy group, or a pharmaceutically acceptable salt thereof. Evaluation as angiotensin II antagonists: IC50 between 5 nM and [illegible] mg/kg. Pharmaceutical formulations were given.

L13 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)

IT **149875-70-7P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**imidazolylmethyl**)phenylquinoline derivs. as angiotensin II antagonists)
RN 149875-70-7 CAPLUS
CN 1H-Imidazole-5-carbonitrile, 2-butyl-4-chloro-1-[[2'-(2H-tetrazol-5-yl)[1,1'-biphenyl]-4-yl]methyl]- (9CI) (CA INDEX NAME)

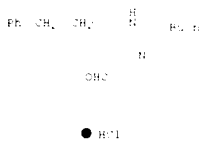


IT **149853-21-4P 149853-22-5P 150146-78-4P**
150146-79-5P 164335-13-1P, 2-Butyl-4-phenethylimidazole-5-carboxaldehyde
RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**imidazolylmethyl** phenylquinoline derivs. as angiotensin II antagonists)
RN 149853-21-4 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-butyl-5-(2-phenylethenyl)-, monohydrochloride (9CI) (CA INDEX NAME)

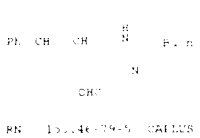


RN [illegible] CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-butyl-5-(phenylethyl)-

L13 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2002 ACS [illegible]
monohydrochloride (9CI) (CA INDEX NAME)



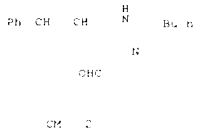
RN 139481-59-7 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-butyl-5-(phenylmethoxy)-, monohydrochloride (9CI) (CA INDEX NAME)



RN 152146-79-4 CAPLUS
CN 1H-Imidazole-4-carboxaldehyde, 2-butyl-5-(phenylmethoxy)-, ethanedioate (9CI) (CA INDEX NAME)

OM 1

OMN 150146-78-3
CMF C16 H18 N2 O



OM 2

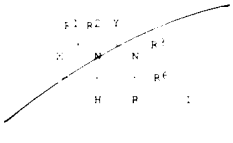
OMN 144-62-7
CMF C2 H2 O4

L13 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:42398 CAPLUS
DOCUMENT NUMBER: 114:42398
TITLE: **Process** for the preparation of D(+)-biotin
INVENTOR(S): Poetsch, Eike; Casutt, Michael
PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Fed. Rep. Ger.
SOURCE: U.S., 19 pp. Continuation-in-part of U.S. 4,877,882.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4937351	A	19900626	US 1989-422882	19891017
IE 61024	A1	19870805	IE 1986-3013	19861121
IE 173972	A1	19890104	IE 1987-3378	19871217
US 4736027	A	19880405	US 1987-39364	19870417
US 4837306	A	19890606	US 1987-141161	19880104
US 4877892	A	19891031	US 1988-253945	19881005
US 5049678	A	19910917	US 1989-420628	19891012

PRIORITY APPLN. INFO.: DE 1986-3632545 19860926
DE 1987-3738972 19871116
US 1987-39364 19870417
US 1988-141161 19880104
US 1988-253945 19881005
US 1989-420628 19891012

OTHER SOURCE(S): MARPAT 114:42398
GI

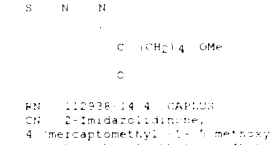


AB A procedure for prepn. of the title compds., comprises redn. of optically active hydantoins I; R1, R2 = H, an substituted alkyl, cycloalkyl, aralkyl, hetero aryl (only O, N, or S; R1R2 = an substituted (hetero alkylene (only O, N, or S; R3 = H, an substituted benzyl; X, Y = O, I; III; RR6 = O to alks. II R = H, R6 = OH), etherification to ethers. II (R = H; R6 = OR5; R5 = C1-6 alkyl), and reaction of the latter with a cyano silane in the presence of a Lewis acid to give nitriles II (R = H, R6 = cyano). Thus, DIBAH redn. of (7aR-I (RR6 = Y = O; R1 = Ph, R2 = H,

L13 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)
R3 = PhCH2, X = S) gave (7RS,7aR)-1 (R = H, R6 = OH) which was treated by 1,1-carbonyldiimidazole in MeCN to give (7RS,7aR)-I (R6 = **imidazolyl**-1-carbonyloxy). This was treated by Me2SiCN in CH2Cl2 at -20.degree. in presence of TiCl4 to give (7RS,7aR)-I (R6 = cyano).
Prepn. of further D(+)-biotin intermediates, e.g., (3aS,4S,6aR)-1,3-dibenzyl-4-(4-carboxybutyryl tetrahydrothieno[3,4-d]**imidazol**-2(3H)-one was also given.

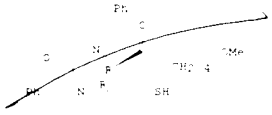
IT **112938-13-3P 112938-14-4P 112938-15-5P**
112938-16-6P 112938-18-8P 112968-29-3P
112968-32-8P
RL: RCT (Reactant); SYN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, in prepn. of biotin intermediate

RN 112938-13-3 CAPLUS
CN 3H,5H-Imidazo[1,5-c]thiazol-5-one, tetrahydro-7-(5-methoxy-1-oxopentyl)-3-phenyl-1-(phenylmethyl)-, (3R-(3.alpha.,7.beta.,7a.alpha.))- (9CI) (CA INDEX NAME)



RN 112938-14-4 CAPLUS
CN 2-Imidazolidinone, 4-[(mercaptomethyl)-5-(5-methoxy-1-oxopentyl)-1,3-bis(phenylmethyl)-, (4R-trans)- (9CI) (CA INDEX NAME)

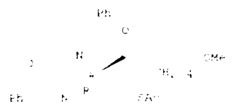
Absolute stereochemistry.



RN 112938-15-5 CAPLUS
CN Ethanethioic acid, S-[(5-(5-methoxy-1-oxopentyl)-2-oxo-1,3-bis(phenylmethyl)-4-imidazolidinyl]methyl] ester, (4R-trans)- (9CI) (CA INDEX NAME)

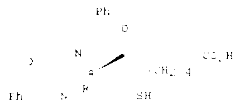
Absolute stereochemistry.

L1[illegible] ANSWER 4 OF [illegible] CAPLUS COPYRIGHT [illegible] ACS (Continued)

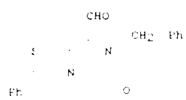


RN 112938-1[illegible] CAPLUS
CN 4-Imidazolidinehexanoic acid,
[illegible]-mercaptomethyl)-.epsilon.,2-dioxo-1,3-
bis(phenylmethyl)-, (4R-trans)- (9CI) (CA INDEX NAME)

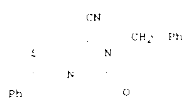
Absolute stereochemistry.



RN 1129[illegible]-1[illegible]-[illegible] CAPLUS
CN 1H,3H-Imidazo[1,5-c]thiazole-7-carboxaldehyde,
tetrahydro-5-oxo-3-phenyl-6-
(phenylmethyl)- (9CI) (CA INDEX NAME)

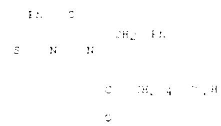


RN 1129[illegible]-29-3 CAPLUS
CN 1H,3H-Imidazo[1,5-c]thiazole-7-carbonitrile,
tetrahydro-5-oxo-3-phenyl-6-
(phenylmethyl)- (9CI) (CA INDEX NAME)



L13 ANSWER 4 OF [illegible] CAPLUS COPYRIGHT [illegible] ACS (Continued)

RN 112968-32-8 CAPLUS
CN 1H,3H-Imidazo[1,5-c]thiazole-7-hexanoic acid,
tetrahydro-.epsilon.,5-dioxo-
3-phenyl-6-(phenylmethyl)- (9CI) (CA INDEX NAME)



L1[illegible] ANSWER 5 OF 7 CAPLUS COPYRIGHT 2002 ACS

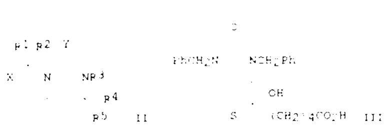
ACCESSION NUMBER: 199[illegible]:423541 CAPLUS
DOCUMENT NUMBER: 113:23541
TITLE: **Process** for the preparation of D-(+)-biotin
INVENTOR(S): Poetsch, Eike; Casutt, Michael
PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Fed. Rep. Ger.
SOURCE: U.S., 18 pp. Cont.-in-part of U.S. 141,161.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4877882	A	19891031	US 1988-[illegible]	1988[illegible]
DE 3613245	A1	19871015	DE 1986-3613245	19860419
DE 3703872	A1	1988[illegible]	DE 1987-3703872	19870207
US 473296[illegible]	A	1988[illegible]	US 1987-39342	19870417
US 4837[illegible]	A	1989[illegible]	US 1988-141161	1988[illegible]
US 493[illegible]	A	1990[illegible]	US 1989-42[illegible]	1989[illegible]
US 5095118	A	19920310	US 1990-[illegible]	19900413

PRIORITY APPLN. INFO.:

DE 1986-3613245	19860419
DE 1987-3703872	19870207
US 1987-39342	19870417
US 1988-141161	1988[illegible]
US 1988-2[illegible]	1988[illegible]
US 1989-42[illegible]	1989[illegible]

OTHER SOURCE(S): MARPAT 113:23541
GI



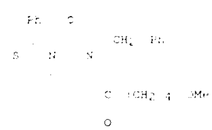
NO

AB The **process** for prepg. the title compd. (I) is characterized in that the synthesis is carried out via an intermediate II (R1, R2 = H, substituted alkyl, cycloalkyl, aryl, aralkyl, heteroaryl wherein the heteroatom is N, O, S; R1R2 = (substituted) alkylene, heteroalkylene; R3 = (substituted) PhCH2; R4R5 = O; X, Y = O, S) by successive redn. to an alc., esterification, conversion to nitrile, to an alkanoyl, cleavage to an **imidazolidine** and cyclizing to a I deriv. which by known methods is converted to I, or conversion of the alkanoyl with an acid to a I

L13 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)
derivs. which by known methods is converted to I.
(3AS,4RS,6aR)-III was
prepd.

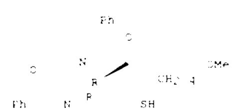
IT **112938-13-3P 112938-14-4P 112938-15-5P**
112938-18-8P 112968-29-3P 112968-32-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction of, in prepn. of biotin intermediate)

RN 112938-13-3 CAPLUS
CN 3H,5H-Imidazo[1,5-c]thiazol-5-one,
tetrahydro-7-(5-methoxy-1-oxopentyl)-3-
phenyl-6-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 112938-14-4 CAPLUS
CN 2-Imidazolidinone,
4-(mercaptomethyl)-5-(5-methoxy-1-oxopentyl)-1,3-
bis(phenylmethyl)-, (4R-trans)- (9CI) (CA INDEX NAME)

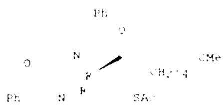
Absolute stereochemistry.



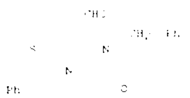
RN 112938-15-5 CAPLUS
CN Ethanethioic acid, S-[[5-(5-methoxy-1-oxopentyl)-2-oxo-1,3-
bis(phenylmethyl)-4-imidazolidinyl]methyl] ester, (4R-trans)-
(9CI) (CA
INDEX NAME)

Absolute stereochemistry.

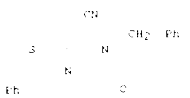
L13 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)



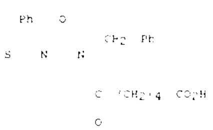
RN 112938-19-9 CAPLUS
CN 1H,3H-Imidazo[1,5-c]thiazole-7-carboxaldehyde, tetrahydro-5-oxo-3-phenyl-6-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 112968-29-3 CAPLUS
CN 1H,3H-Imidazo[1,5-c]thiazole-7-carbonitrile, tetrahydro-5-oxo-3-phenyl-6-(phenylmethyl)- (9CI) (CA INDEX NAME)

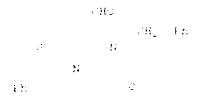


RN 112968-32-8 CAPLUS
CN 1H,3H-Imidazo[1,5-c]thiazole-7-hexanoic acid, tetrahydro-.epsilon.,5-dioxo-3-phenyl-6-(phenylmethyl)- (9CI) (CA INDEX NAME)



L13 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)

IT **112938-18-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (prepn. and O-acetylation of)
RN 112938-18-8 CAPLUS
CN 1H,3H-Imidazo[1,5-c]thiazole-7-carboxaldehyde, tetrahydro-5-oxo-3-phenyl-6-(phenylmethyl)- (9CI) (CA INDEX NAME)

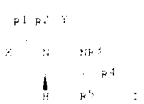


L13 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1988:112077 CAPLUS
DOCUMENT NUMBER: 108:112077
TITLE: **Process** for the preparation of (+)-biotin
INVENTOR(S): Poetsch, Eike; Casutt, Michael
PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Fed. Rep. Ger.
SOURCE: Eur. Pat. Appl., 71 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 242686	A2	1987[illegible]	EP 1987[illegible]	1987[illegible]
EP 242686	A3	1988[illegible]		
EP 242686	B1	1992[illegible]		
R: CH, DE, FR, GB, IT, LI				
DE 3613245	A1	1987[illegible]	DE 1986-3613245	1986[illegible]
DE 3703872	A1	1988[illegible]	DE 1987-37[illegible]	1987[illegible]

PRIORITY APPLN. INFO.: DE 1986-3613245 1986[illegible]
DE 1987-37[illegible] 1987[illegible]

GI

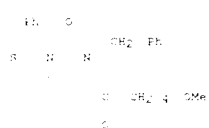


NO

AB A procedure for the prepn. of (+)-biotin from L-cysteine or L-cystine or L-serine via bicyclic intermediate I [R1,R2 = H, (un)substituted alkyl, cycloalkyl, aryl, aralkyl, heteroaryl; R1R2 = (un)substituted alkylene, heteroalkylene; R3 = H, N-protective group; R4R5 = O; X, Y = O, S] is described. LiBH4 redn. of [illegible] (R1 = Ph, R2 = H, R3 = PhCH2, R4R5 = Y = O, X = S) (III) gave (3S,7aR)-I (R1 = Ph, R2 = R5 = H, R3 = PhCH2, R4 = OH, Y = O, X = S) which was treated with 1,1'-carbonyldiimidazole to give (3S,7aR)-I (R4 = **imidazol**-1-ylcarbonyloxy) (IV). Successive treatment of IV with MeI and NaCN, followed by DIBAL treatment of resulting (R,7aR)- and (S,7aR)-I (R4 = cyano) gave a mixt. of (R,7aR)- and (S,7aR)-I (R4 = CHO). Wittig reaction of the latter mixt. with [illegible] afforded a mixt. of (R,7aR)- and (S,7aR)-I (R4 = 5-carboxy-1-pentenyl), and the mixt. was reduced with Zn dust in AcOH to give (3aS,4S,6aR)-1,3-dibenzyl-4-(4-carboxybutyl)tetrahydrothieno[3,4-d]**imidazol**-2(3H)-one (II).

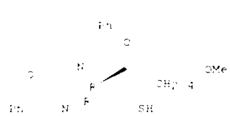
L13 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)

IT **112938-13-3P 112938-14-4P 112938-15-5P 112938-16-6P 112938-18-8P 112968-29-3P 112968-32-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation) (prepn. and reaction of, in synthesis of biotin intermediates)
RN 112938-13-3 CAPLUS
CN 3H,5H-Imidazo[1,5-c]thiazol-5-one, tetrahydro-7-(5-methoxy-1-oxopentyl)-3-phenyl-6-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 112938-14-4 CAPLUS
CN 2-Imidazolidinone, 4-(mercaptomethyl)-5-(5-methoxy-1-oxopentyl)-1,3-bis(phenylmethyl)-, (4R-trans)- (9CI) (CA INDEX NAME)

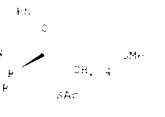
Absolute stereochemistry.



RN 112938-15-5 CAPLUS
CN Ethanethioic acid, S-[[5-(5-methoxy-1-oxopentyl)-2-oxo-1,3-bis(phenylmethyl)-4-imidazolidinyl]methyl] ester, (4R-trans)- (9CI) (CA INDEX NAME)

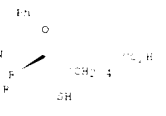
Absolute stereochemistry.

L13 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)

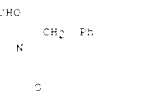


RN 112948-19-6 CAPLUS
CN 4-Imidazolidinehexanal, 1-acetyl-5-[(acetylthio)methyl]-2-oxo-3,4-bis(phenylmethyl)-, [3R-[3R*,4S*,5R*(R*)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

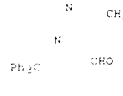


RN 112948-18-5 CAPLUS
CN 1H,3H-Imidazo[1,5-c]thiazole-7-carboxaldehyde, tetrahydro-5-oxo-3-phenyl-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

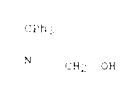


RN 112948-29-3 CAPLUS
CN 1H,3H-Imidazo[1,5-c]thiazole-7-carbonitrile, tetrahydro-5-oxo-3-phenyl-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

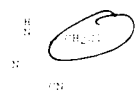
RN 82032-50-6 CAPLUS
CN 1H-Imidazole-5-carboxaldehyde, 4-(hydroxymethyl)-1-(triphenylmethyl)- (9CI) (CA INDEX NAME)



IT **82032-51-7P**
PL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
prepn. and deprotection of, reaction of, with thionyl chloride
RN 4,5-Imidazoledicarboxylic acid, 1-(triphenylmethyl)-, dimethyl ester (9CI) (CA INDEX NAME)

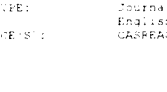


IT **82032-53-9P**
PL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
prepn. and substitution reaction of, with aminoethanethiol
RN 82032-54-0 CAPLUS
CN 1H-Imidazole-4-carbonitrile, 5-(chloromethyl)-, monohydrochloride (9CI) (CA INDEX NAME)

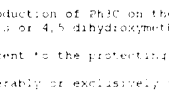


● HCl

IT **82032-52-8P 82032-54-0P**
PL: SPN (Synthetic preparation); PREP (Preparation)
prepn. of



RN 112948-18-5 CAPLUS
CN 1H,3H-Imidazo[1,5-c]thiazole-7-carboxaldehyde, tetrahydro-5-oxo-3-phenyl-1-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 112948-29-3 CAPLUS
CN 1H,3H-Imidazo[1,5-c]thiazole-7-carbonitrile, tetrahydro-5-oxo-3-phenyl-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

ACCESSION NUMBER: 1982:476222 CAPLUS
DOCUMENT NUMBER: 97:76222
TITLE: Synthesis of 4,5-disubstituted **imidazoles**
AUTHOR(S): Ravindran, Gerry; Luh, Bing; Saintonge, Roger
CORPORATE SOURCE: Bristol Lab. Canada, Candiac, PQ, J5R 1T1, Can.
SOURCE: Can. J. Chem. 1982, 60(6), 721-9
CODEN: CJCHAG; ISSN: 0008-4042
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 97:76222
GI

AB Introduction of Ph3C on the N of **imidazole** 4,5 dicarboxylic acid esters or 4,5 dihydroxymethylimidazole deactivated the functional group adjacent to the protecting group and allowed reactions to take place preferably or exclusively on the other functional group. Thus, di-Me 1-triphenylmethylimidazole 4,5-dicarboxylate (I), on treatment with NH2NH2 and MeNH2 produced Me 4-hydrazinocarbonyl-1-triphenylmethylimidazole 5-carboxylate and Me 4-methylaminocarbonyl 1-triphenylmethylimidazole 5-carboxylate, resp. Redn. of I with LiBH4 gave Me 4-hydroxymethyl-1-triphenylmethylimidazole 5-carboxylate. Treatment of 4,5-bis(hydroxymethyl)-1-triphenylmethylimidazole (II) with MeI, KOH, and with Ac2O afforded 5-hydroxymethyl 4-trimethylacetoxymethyl-1-triphenylmethylimidazole, and 4-acetoxymethyl 5-hydroxymethyl 1-triphenylmethylimidazole, resp. Oxidn. of II with activated MnO2 produced the monoaldehydes III and IV in a ratio of 1:1. A new mild **process** for deprotection of N triphenylmethylimidazoles, compatible with acid sensitive groups in the mol., is reported. The synthesis of several 4,5 disubstituted **imidazoles** is also described.
IT **82032-50-6P**
PL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
prepn. and NMR of

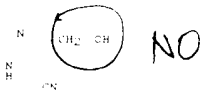
L13 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2 [illegible]

RN [illegible] CAPLUS

CN 1H-Imidazole-4-carbonitrile, 1-(hydroxymethyl)- [illegible]

(9CI)

(CA INDEX NAME)



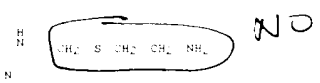
● HCl

RN [illegible] CAPLUS

CN 1H-Imidazole-4-carbonitrile, 5-[[2-(dimethylamino)ethyl]thio]methyl]- [illegible]

CA

(INDEX NAME)



IT **82032-49-3P**

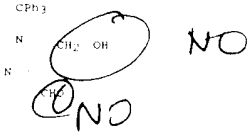
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn., reactions of, and NMR of)

RN [illegible]82-49-3 CAPLUS

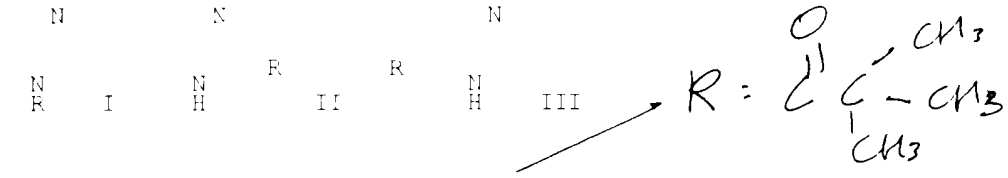
CN 1H-Imidazole-4-carboxaldehyde, 5-hydroxymethyl-1-(triphenylmethyl)-

(9CI) (CA INDEX NAME)



:.ept reference ● vs. claim 17 ● or 10/019004

24 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1977:106471 CAPLUS
DOCUMENT NUMBER: 86:106471
TITLE: Photochemical reactions. Part 91. Photochemistry of imidazolides. I. The photo-Fries-type rearrangement of N-substituted imidazoles
AUTHOR(S): Iwasaki, Shigeo
CORPORATE SOURCE: Org.-Chem. Lab., ETH, Zurich, Switz.
SOURCE: Helv. Chim. Acta (1976), 59(8), 2733-52
CODEN: HCACAV
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



AB Imidazoles I (R = Ac, Me(CH2)6CO, cyclohexylcarbonyl, Me3CCO, Bz, Me2C:CHCO, MeO2C, Et2NCO, PhCH2) underwent photochem. rearrangements to give 8-45% II and 10-35% III. The structures of II and III were confirmed by spectral data, which are reported.

IT **61985-31-7P**
RL: PREP (Preparation)
(by photochem. rearrangement of 1-acyl analog)
RN 61985-31-7 CAPLUS
CN 1-Propanone, 1-(1H-imidazol-4-yl)-2,2-dimethyl- (9CI) (CA INDEX NAME)